



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department
of Community Health



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New updates in this issue:

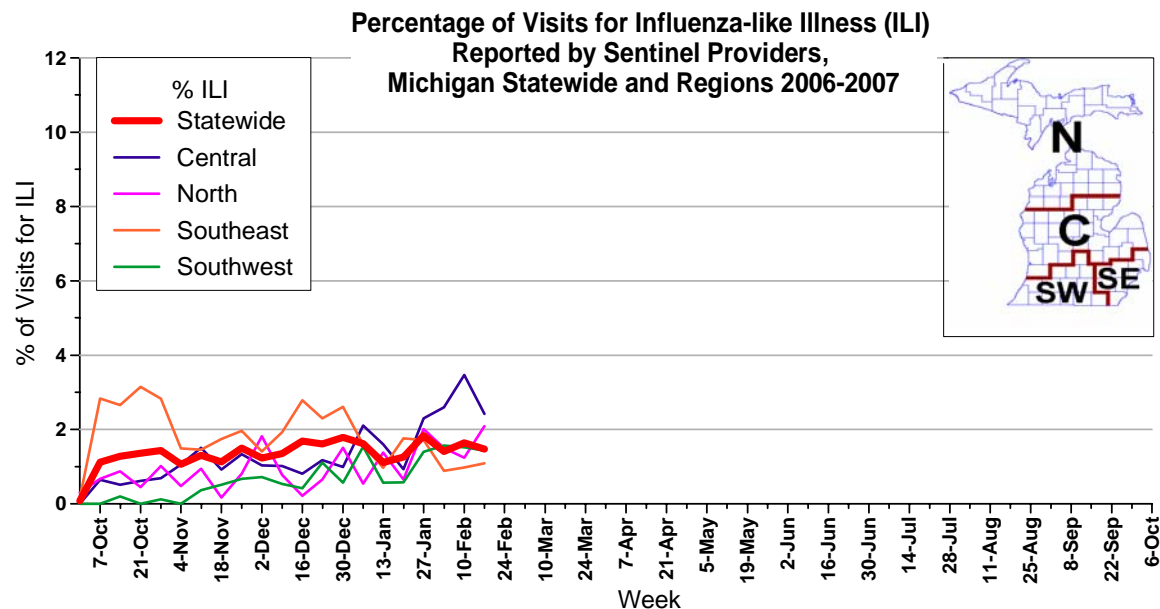
- **Michigan Surveillance:** Most indicators suggest low and steady influenza activity.
- **National Surveillance:** Activity is increasing, with most states at regional or widespread activity.
- **Avian Influenza:** Egypt reports a new case and a death; poultry outbreaks in multiple countries.

Michigan Disease Surveillance System: The last week has seen a slight increase in both aggregate flu-like illness and individual influenza reports to the local health departments. The current flu-like illness reported levels, however, are comparable to that seen at this time last year.

Emergency Department Surveillance: Emergency department visits due to constitutional and respiratory complaints remained steady this past week. The levels reported are consistent with levels reported this time last year. Two constitutional alerts, both in Region 5, and four respiratory alerts in Regions 1(1), 5(1), and 7(2) were generated last week.

Over-the-Counter Product Surveillance: OTC product sales generally remained steady or saw a slight increase (pediatric anti-fever, adult cold relief liquid, and internal nasal products). The only exception was pediatric cold relief liquids, which saw a slight decrease in sales. The indicators levels are comparable to those seen at this time last year, except for the adult and pediatric cold relief liquid, which seem to be holding about 1-2% below its percentage of total sales for this time last year.

Sentinel Surveillance (as of February 22, 2007): During the week ending February 17, 2007, the proportion of visits due to influenza-like illness (ILI) remained relatively unchanged from last week at 1.5% of all visits, representing 110 cases of ILI out of 7,488 total patient visits; twenty-eight sentinels provided data for this report. The percentage of visits due to ILI in each of the surveillance regions is 2.4%, Central; 2.1%, North; 1.1% Southeast; and 1.4% Southwest. Note that these rates may change as additional reports are received.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage and recommend year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of February 22): For the 2006-2007 influenza season, there have been 78 culture-confirmed cases from the MDCH Lab:

- 53 A:H1N1 (Southeast (18), Southwest (18), Central (11), North (6))
- 6 A:H3N2 (Southwest (3), North (2), Southeast (1))
- 19 B (Southeast (6), Central (5), Southwest (4), North (3), Wisconsin (1)).

All influenza B cultures have been B/Malaysia, except for one B/Shanghai from the Southeast region. Overall MDCH submission activity is starting to increase. Sentinel laboratories in the Southwest and Central regions are reporting a continued steady increase in the number of positive results, while Northern labs are reporting their first positives and the South continues to hold steady. Low but steady levels of parainfluenza, adenovirus and respiratory syncytial virus are being reported as well.

***As a reminder, the positive predictive value of influenza rapid tests decreases during times of low influenza prevalence. MDCH suggests that during periods of low influenza activity in your community, all positive rapid tests results be confirmed by sending in a specimen for viral culture; this can be arranged through your local health department.

Influenza-Associated Pediatric Mortality (as of February 22): For the 2006-2007 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan.

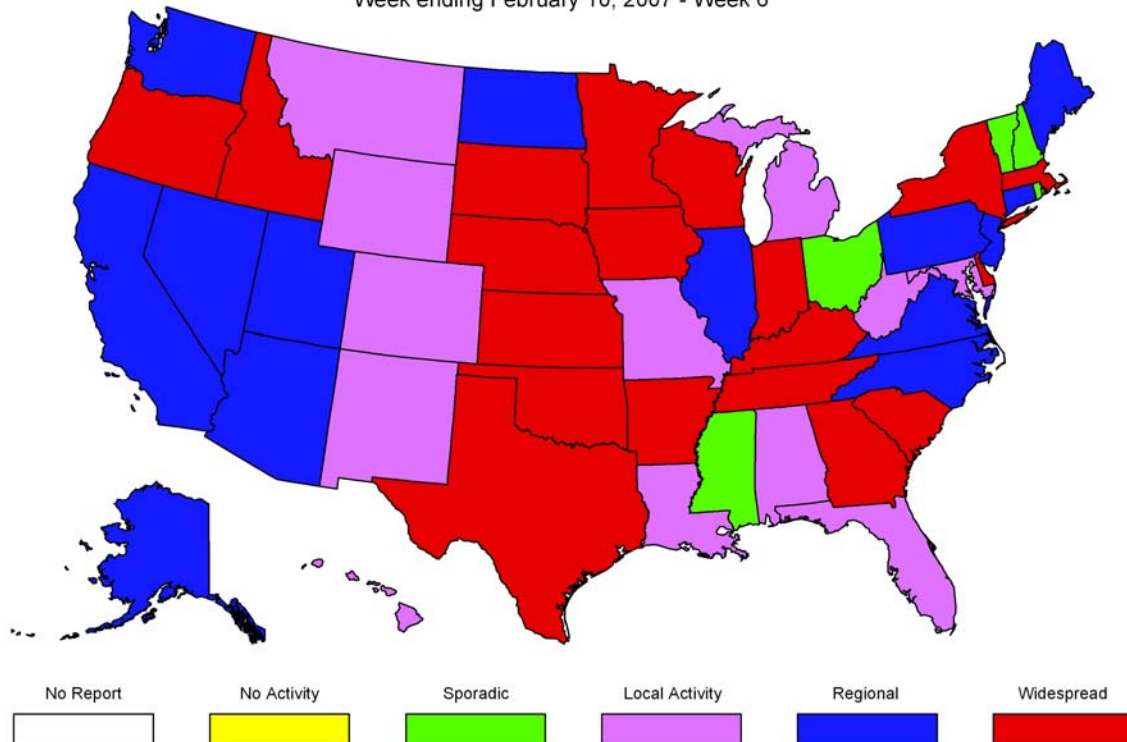
***Reminder: The CDC has asked all states to continue to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child less than 18 years of age resulting from a clinically compatible illness confirmed to be influenza by an appropriate laboratory or rapid diagnostic test, but also unexplained death with evidence of an infectious process in a child. Refer to http://www.michigan.gov/documents/fluletter_107562_7.pdf for the complete protocol. It is important to immediately call or fax information to MDCH to ensure that appropriate clinical specimens can be obtained.

Congregate Settings Outbreaks (as of February 22): No reports were received during the past week. There have been no reports of influenza outbreaks to MDCH for the 2006-2007 influenza season.

National (CDC, February 16): During week 6 (February 4 - February 10, 2007), influenza activity continued to increase in the United States. During week 6, WHO and NREVSS laboratories reported 3,986 specimens tested for influenza viruses, 1,071 (26.9%) of which were positive: 76 influenza A (H1) viruses, 12 influenza A (H3) viruses, 793 influenza A viruses that were not subtyped, and 190 influenza B viruses. ILI data was above baseline for week 6. Nineteen states reported widespread influenza activity; 14 states reported regional influenza activity; 12 states and New York City reported local influenza activity; five states and the District of Columbia reported sporadic influenza activity; and two states did not report. The reporting of widespread or regional influenza activity increased from 28 states for week 5 to 33 states for week 6. The percent of deaths due to pneumonia and influenza remained below baseline level.

To access the CDC weekly surveillance report throughout the influenza season, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>.

Week ending February 10, 2007 - Week 6



International (WHO, as of February 15): WHO has published a summary of the 2006-2007 influenza season to date, which can be found at <http://www.who.int/csr/disease/influenza/20078anorthreport.pdf>. Overall, worldwide influenza activity was low when compared to previous years. In addition, recommendations have been made for the 2007-2008 Northern Hemisphere vaccine strains: an A/Solomon Islands/3/2006 (H1N1)-like virus, an A/Wisconsin/67/2005 (H3N2)-like virus, and a B/Malaysia/2506/2004-like virus. Candidate H3N2 vaccine viruses include A/Wisconsin/67/2005 (H3N2) and A/Hiroshima/52/2005.

MDCH reported **LOCAL ACTIVITY** to the CDC for this past week ending February 17, 2007.

End of Seasonal Report

Avian Influenza Activity

WHO Pandemic Phase: Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread or rare instances of spread to a close contact.

International, Human (WHO, February 16): The Egyptian Ministry of Health and Population has confirmed the country's 13th death from H5N1 avian influenza. The 37-year-old female whose infection was announced on February 15th, died today. Of the 21 cases confirmed to date in Egypt, 13 have been fatal.

International, Human (WHO, February 19): The Egyptian Ministry of Health and Population has announced a new human case of avian influenza A(H5N1) virus infection. The case was confirmed by the Egyptian Central Public Health Laboratory and by the US Naval Medical Research Unit No.3 (NAMRU-3). The 5-year-old boy from Sharkia Governorate was admitted to hospital with symptoms on February 14th, and his condition remains stable. The boy was exposed to sick birds one week prior to the onset of symptoms. Contacts of the boy remain healthy and have been placed under close observation. Of the 22 cases confirmed to date in Egypt, 13 have been fatal.

International, Poultry (UK DEFRA, February 15): Key points from the article entitled “Veterinary risk assessment for the animal health risks of HPAI [highly pathogenic avian Influenza] potentially infected poultry meat”:

In conclusion, the available evidence does not demonstrate conclusively that infected poultry meat may have entered the UK from Hungary. Hungarian authorities have confirmed that turkeys were not sourced from their restricted areas. However, if it did, then only a single batch is likely to have been affected. The specific tissues imported are likely to contain low levels of virus.

Risk management measures as explained above are already in place to deal with the background level of risk that foodstuffs may contain low, undetected levels of virus liable to cause animal disease.

There is a low likelihood that infected poultry meat is present in the UK. There are already measures in place to mitigate this level of animal health risk so it would be disproportionate and unnecessary to trace and dispose of Hungarian meat.

The entire document can be read at <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/vra-recallpoultrymeat.pdf>.

Editor’s Note: For the most up-to-date information regarding the UK poultry outbreak investigation, the following websites may be helpful:

<http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/index.htm>

<http://www.promedmail.org/pls/promed/f?p=2400:1000> (Avian Influenza section)

International, Poultry (ProMed via the Vientiane Times, February 17): On February 13, the Laos Department of Livestock and Fisheries of the Ministry of Agriculture and Forestry informed the National Avian Human Influenza Coordination Office of the detection of H5N1 among ducks on a private farm in Phonpapao-thong village, and in a private backyard in Dongsavath village in Sisattanak district, Vientiane. The report specified that 7 of the 1100 ducks on the farm had died, while more than 100 were sick, and that 12 of the 600 ducks [in the private backyard] had died.

The movement of poultry in and out of the detected areas was restricted, and more than 83,000 people living in the 50 villages near the area were surveyed for suspect symptoms from February 14-15, 2007. Authorities were also checking inhabitants in 20 villages between Xaysettha and Sisattanak districts, and plan to cull all ducks on the 2 affected properties.

International, Poultry (Xinhua News Agency, February 20): Veterinary authorities have confirmed the presence of the H5N1 bird flu strain in poultry in three suburban Moscow districts and are conducting more tests to determine the cause of poultry deaths in other areas around the capital, officials said on Tuesday. A total of 190 birds have died in areas outside Moscow since Feb. 10 and the presence of the H5N1 strain has been confirmed in birds in the Domodedovo, Podolsk and Odintsovo districts, emergency officials were quoted by the Itar-Tass news agency as saying. The results of new tests will be available in the coming days, they added. Moscow’s Sadovod market has been closed after poultry that died of bird flu was found to have been sold at the market. Authorities culled 1,924 birds at the market in an attempt to stem the spread of the virus, the Interfax news agency reported. Russia’s most recent bird flu outbreak occurred in mid-January in the southern region of Krasnodar. No human cases of bird flu have been reported in the country.

International, Poultry (Associated Press, February 21): Afghan authorities were culling poultry after an outbreak of the deadly H5N1 strain of bird flu in chickens in an eastern Afghan city, a U.N. official said Wednesday, February 21, 2007. Bird flu was reported in the eastern provinces of Nangarhar and Kunar, said Serge Verniau, the country representative of the U.N.’s Food and Agriculture Organization in Afghanistan.

Samples from chickens in the Nangarhar provincial capital of Jalalabad were found to have the H5N1 strain, while the exact type of the outbreak in Kunar has yet to be confirmed, Verniau said. Afghanistan reported its 1st outbreaks of H5N1 in March and April last year [2006] in the capital Kabul and the provinces of Kapisa, Logar and Nangarhar. There have been no reported infections of humans.

The latest Afghan outbreak was reported a day after authorities in neighboring Pakistan closed a zoo in the capital Islamabad following lab tests that confirmed H5N1 in its peacocks and geese. "We do not know whether it is the same strain as the one which appeared in Pakistan," Verniau said. Afghanistan is a crossroads for migratory birds, and there is considerable trade among countries in the region, he said.

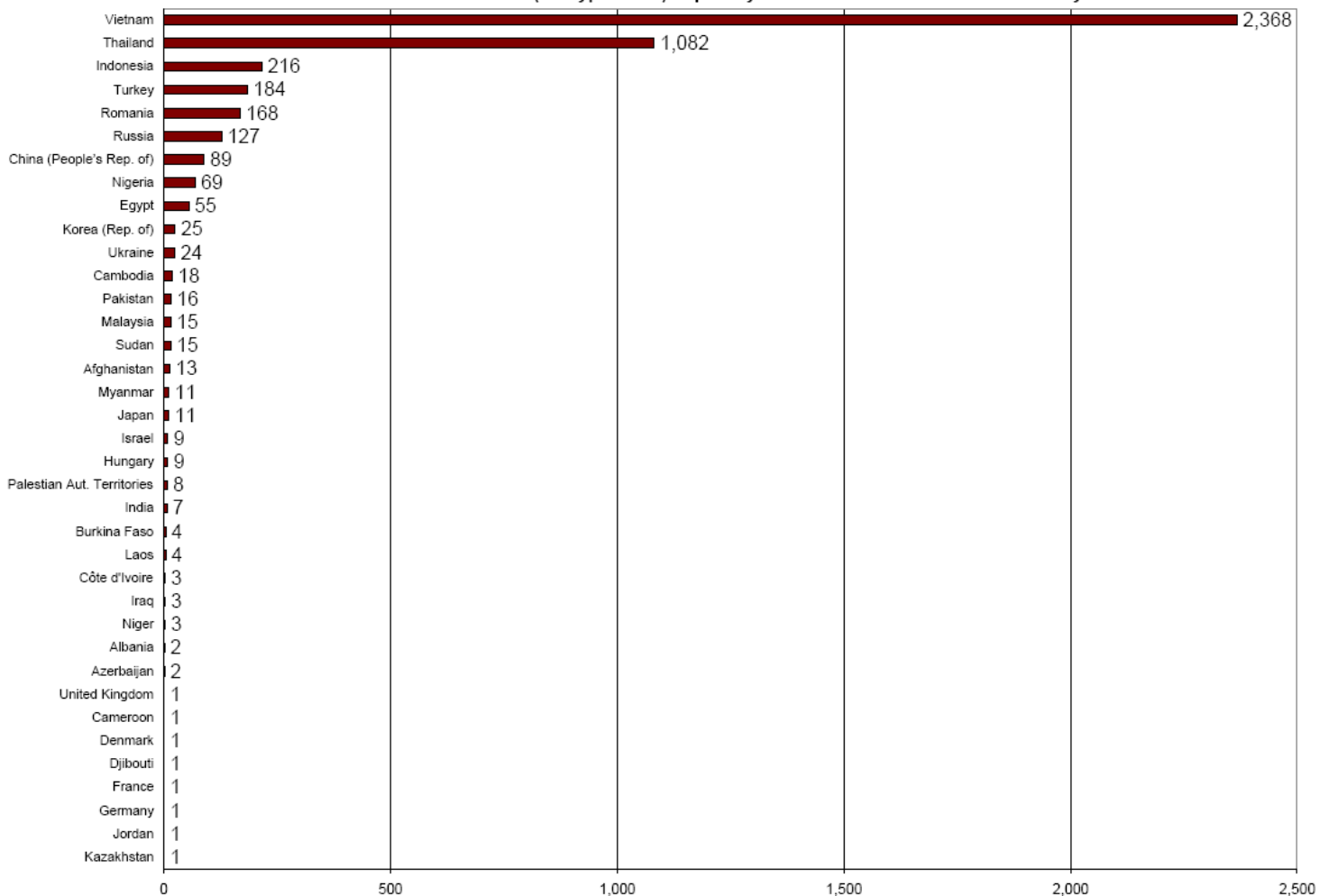
International, Wildlife (Reuters, February 20): Four peacocks and a goose have died of the H5N1 strain of bird flu in the only zoo in the Pakistani capital, Islamabad, an Agriculture Ministry official said on Tuesday. "We conducted tests and they were all positive for H5N1," Mohammad Afzal, livestock commissioner at the Ministry of Food and Agriculture, told Reuters. It was the fourth case of the H5N1 strain of bird flu detected in Pakistan this year. The H5N1 strain was first found in poultry last year and it reappeared in poultry this month.

Michigan Wild Bird Surveillance (USDA, February 22): Confirmatory testing is underway on samples from an American Black Duck from Hyde Co., NC that has initially tested positive for the H5 and N1 strains of avian influenza. These samples are of the low pathogenic "North American" strain and have been circulating in the United States for many years. They are not related to the "Asian" highly pathogenic avian influenza strain that is currently circulating in Asia, Africa and Europe. The samples were collected from a live bird by the Southeastern Cooperative Wildlife Disease Study.

According to the National HPAI Early Detection Data System website, available at <http://wildlifedisease.nbj.gov/ai/>, Michigan has results for a total of 1799 samples, from both wild birds and the environment, submitted for testing as of February 14th. 232 of these were live-captured birds, 595 were hunter-killed, 174 were sentinel animals, 591 were dead birds that were submitted for testing, and 207 were environmental samples. HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 95,131 birds or environmental samples tested nationwide.

To learn about avian influenza surveillance in Michigan wild birds or to report dead waterfowl, go to Michigan's Emerging Disease website at <http://www.michigan.gov/emergingdiseases>.

Please contact Susan Vagasky at VagaskyS@Michigan.gov with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

Table 1. H5N1 Influenza in Poultry (Outbreaks up to February 21, 2007)(Source: http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 2/22/2007)**Outbreaks of Avian Influenza (subtype H5N1) in poultry. From the end of 2003 to 21 February 2007****Table 2. H5N1 Influenza in Humans (Cases up to February 19, 2007)**

(http://www.who.int/entity/csr/disease/avian_influenza/country/cases_table_2006_06_06/en/index.html Downloaded 2/20/2007)

Cumulative number of confirmed human cases of Avian Influenza A(H5N1) reported to WHO. The total number of cases includes number of deaths. WHO only reports laboratory-confirmed cases.

Country	2003		2004		2005		2006		2007		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	0	0	6	6
China	1	1	0	0	8	5	13	8	0	0	22	14
Djibouti	0	0	0	0	0	0	1	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	4	3	22	13
Indonesia	0	0	0	0	19	12	56	46	6	5	81	63
Iraq	0	0	0	0	0	0	3	2	0	0	3	2
Nigeria	0	0	0	0	0	0	0	0	1	1	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	0	0	93	42
Total	4	4	46	32	97	42	116	80	11	9	274	167